iPhone 7 Plus Taptic Engine Replacement

Replace the Taptic Engine in an iPhone 7 Plus.

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INTRODUCTION

The Taptic Engine produces your iPhone's vibration and haptic feedback functions. Use this guide to remove and/or replace the Taptic Engine in an iPhone 7 Plus.

This guide instructs you to remove the display assembly; this is intended to prevent damage to the display cables. If you feel comfortable removing the Taptic Engine without putting undue strain on the display cables, you can skip the display removal steps.

TOOLS:

- Spudger (1)
- Suction Handle (1)
- iFixit Opening Picks set of 6 (1)
- Tri-point Y000 Screwdriver Bit (1)
- P2 Pentalobe Screwdriver iPhone (1)
- iOpener (1)
- Phillips #000 Screwdriver (1)
- Tweezers (1)

Step 1 — Pentalobe Screws



- ⚠ Before you begin, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.
- Power off your iPhone before beginning disassembly.
- ⚠ Opening the iPhone's display will compromise its waterproof seals. Take extra care not to expose your iPhone to liquid damage after completing your repair.
- Remove the two 3.4 mm pentalobe screws at the bottom edge of the iPhone.

Step 2 — Opening Procedure



- ⓘ Heating the lower edge of the iPhone will help soften the adhesive securing the display, making it easier to open.
- Use a hairdryer or [prepare an iOpener] and apply it to the lower edge of the iPhone for about a minute in order to soften up the adhesive underneath.

Step 3





- Apply a suction cup to the lower half of the front panel, just above the home button.
  - ⓘ Be sure the suction cup does not overlap with the home button, as this will prevent a seal from forming between the suction cup and front glass.

Step 4





- Pull up on the suction cup with firm, constant pressure to create a slight gap between the front panel and rear case.
- Insert the flat end of a spudger into the gap.
  - ⓘ The watertight adhesive holding the display in place is very strong; creating this initial gap takes a significant amount of force. If you're having a hard time opening a gap, rock the screen up and down to weaken the adhesive until you can fit a spudger inside.
- While pulling up on the suction cup, twist the spudger to widen the opening between the screen and rear case.

Step 5





- Insert the flat end of the spudger between the front panel and the rear case at the lower left edge of the iPhone.
- Slide the spudger up the left edge of the phone starting at the lower edge and moving towards the volume control buttons and silent switch, breaking up the adhesive holding the display in place.

⚠ Do not try to pry the top edge of the display away from the rear case, as it is held in place by plastic clips that may break.

Step 6

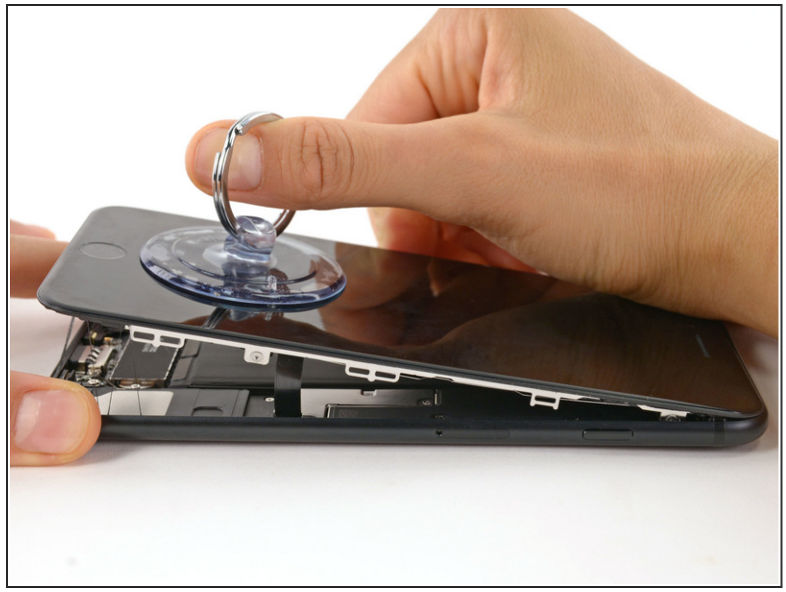




- Remove the spudger from the left side of the phone and insert the flat end into the bottom right corner.
- Slide the spudger up the right edge of the phone to the top corner, breaking up the adhesive holding the display in place.

Step 7





- Pull up on the suction cup to lift up the display and open the iPhone.
  - **Do not raise the display more than 10º** as there are delicate ribbon cables along the right edge of the device connecting the display to the logic board.

Step 8





- Pull up on the small nub on the suction cup to remove it from the front panel.

Step 9




- Slide an opening pick underneath the display along the top edge of the phone to loosen the last of the adhesive.

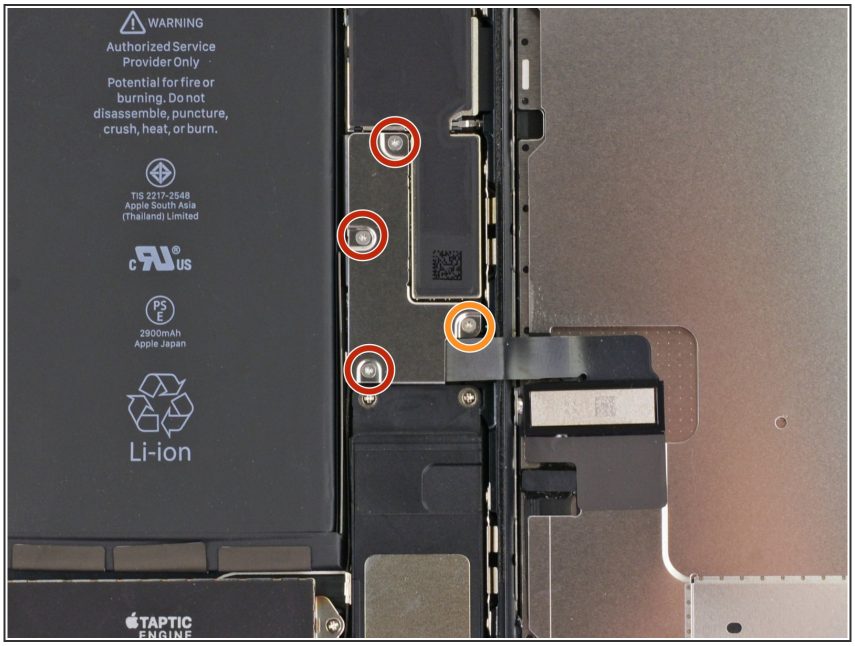
Step 10





- Pull the display assembly slightly away from the top edge of the phone to disengage the clips holding it to the rear case.
- Open the iPhone by swinging the display up from the left side, like the back cover of a book.
  - ⚠ Don't try to fully separate the display yet, as several fragile ribbon cables still connect it to the iPhone's logic board.

Step 11 — Battery Disconnection



- Remove the following four tri-point Y000 screws securing the lower display cable bracket to the logic board:
  - Three 1.2 mm screws
  - One 2.6 mm screw

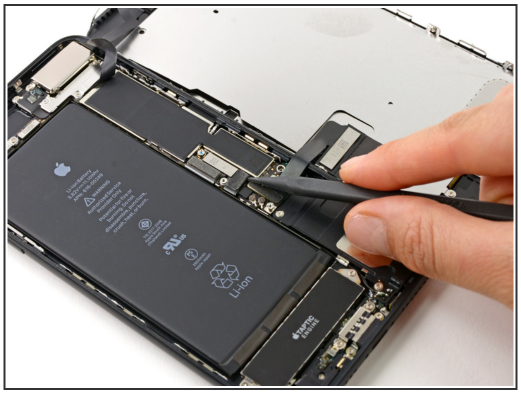
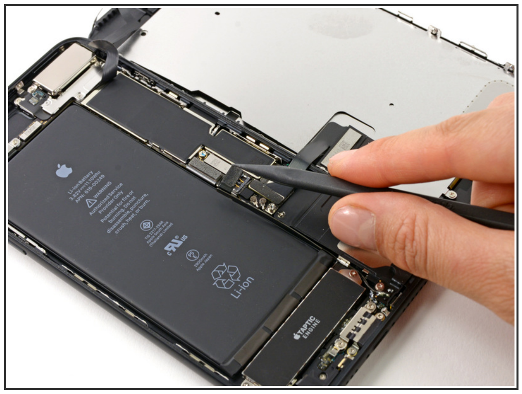
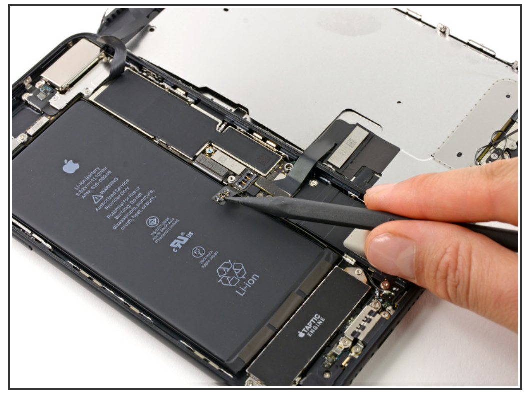
Step 12





- Remove the lower display cable bracket.

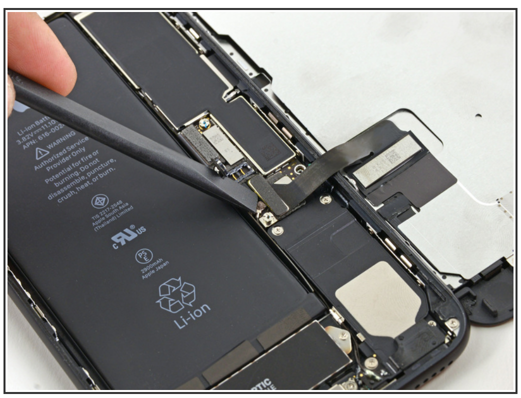
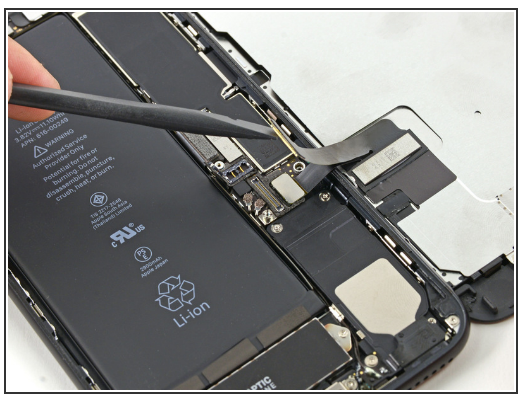
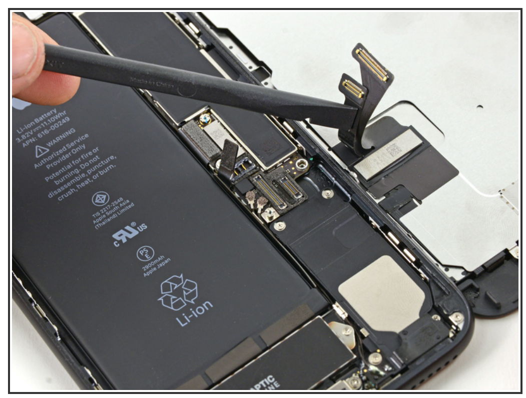
Step 13

- Use the point of a spudger to lift the battery connector out of its socket on the logic board.

ⓘ Bend the connector cable up slightly to prevent it from making contact with the socket and providing power to the phone.

Step 14 — Display Assembly

- Use the flat end of a spudger or a fingernail to disconnect the two lower display connectors by prying them straight up from their sockets on the logic board.

📌 To re-attach press connectors, press down on one end until it clicks into place, then repeat on the other end. Do not press down on the middle. If the connector is even slightly misaligned, the connector can bend, causing permanent damage.

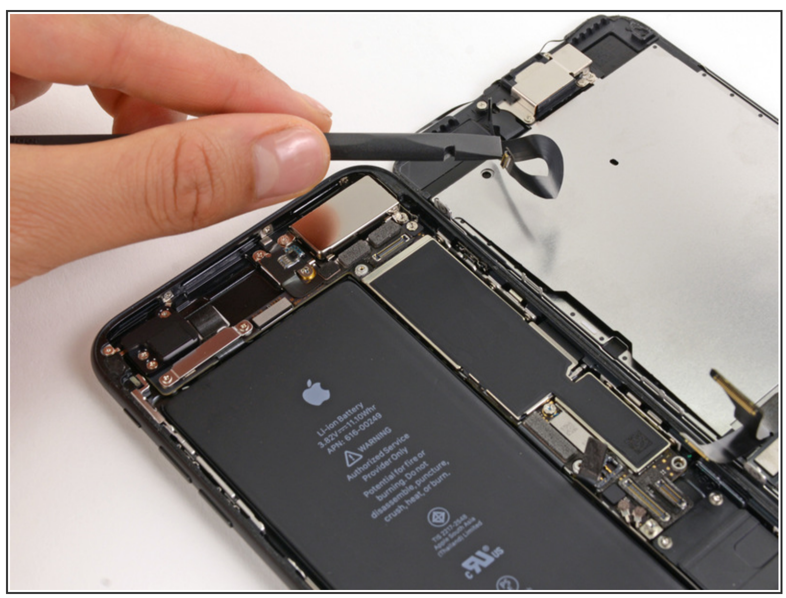
Step 15





- Remove the three tri-point Y000 screws securing the bracket over the front panel sensor assembly connector:
  - One 1.3 mm screw
  - Two 1.0 mm screws
- Remove the bracket.

Step 16

- Disconnect the front panel sensor assembly connector from its socket on the logic board.

This press connector should also be reconnected one end at a time to minimize the risk of bending.

Step 17



- Remove the display assembly.
- During reassembly, pause here if you wish to replace the adhesive around the edges of the display.

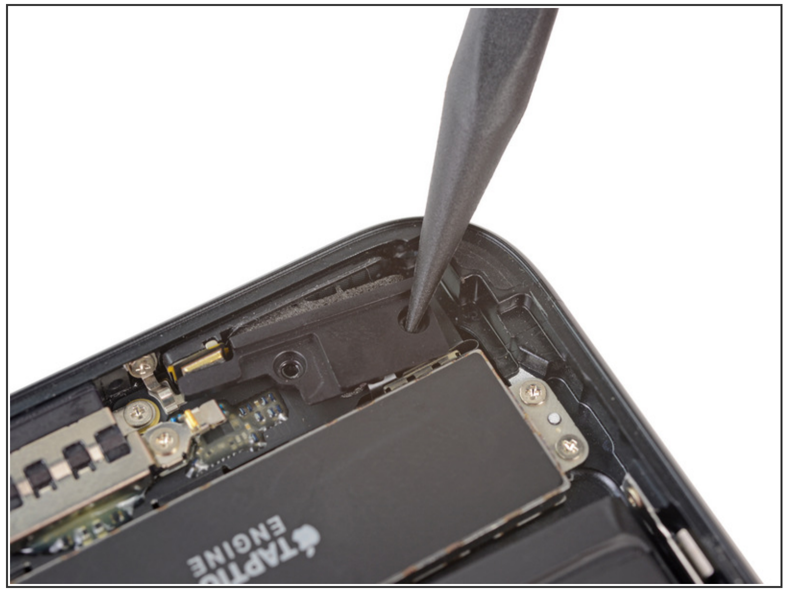
Step 18 — Barometric Vent



- Remove the following two Phillips screws securing the barometric vent to the rear case:
  - One 2.9 mm screw
  - One 2.1 mm screw

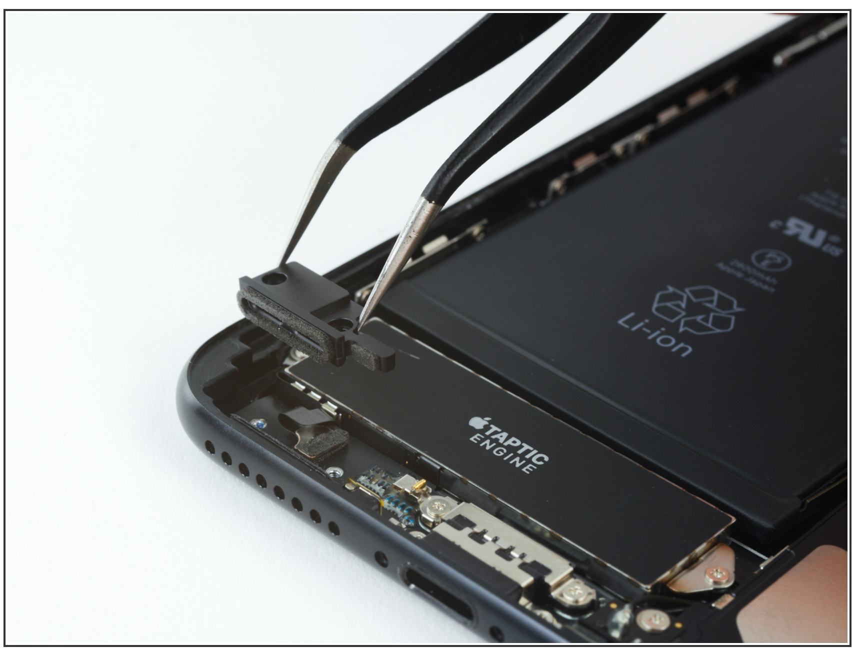
Step 19





- Gently push the barometric vent in the direction of the Taptic Engine to separate the adhesive securing it to the bottom edge of the iPhone.

Step 20



- Remove the vent.

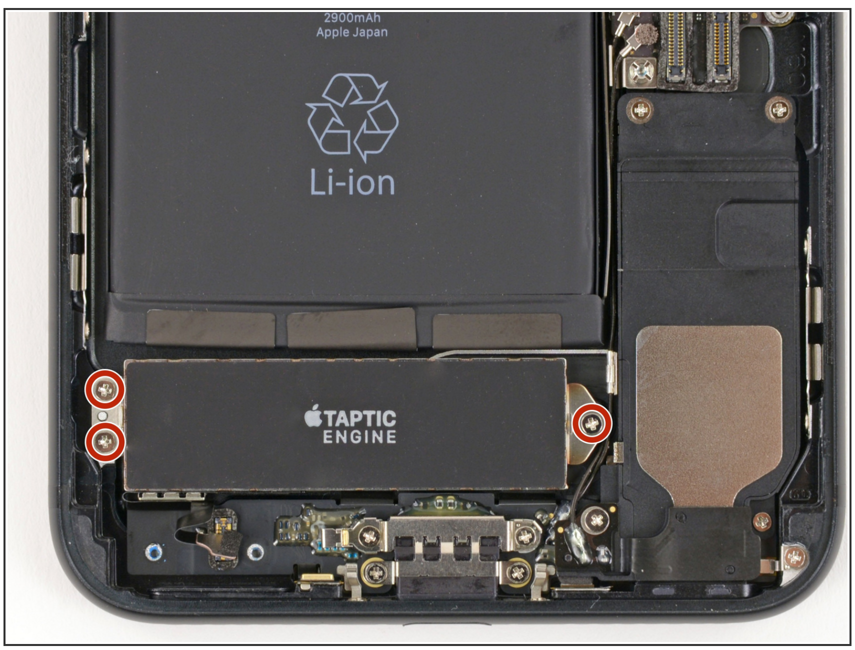
Step 21 — Taptic Engine





- Use the flat end of a spudger to disconnect the Taptic Engine connector from its socket on the logic board.

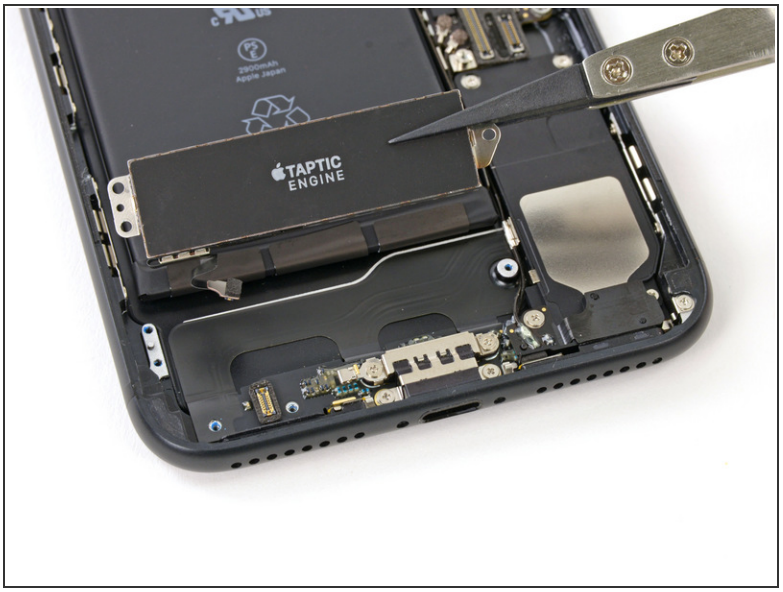
Step 22



- Remove the three 1.5 mm Phillips screws securing the Taptic Engine to the rear case.

Step 23





- Remove the Taptic Engine.

To reassemble your device, follow these instructions in reverse order.

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